

Remarks

Claims 1, 4-8, 16, and 19-23 are pending in this application. The examiner has rejected claims 1, 4-8, 16 and 19-23 under 35 U.S.C. § 103(a) as being unpatentable over allegedly admitted prior art in view of U.S. Patent No. 6,282,601 to Goodman et al. and U.S. Patent No. 3,643,227 to Smith et al.

A. Independent Claims 1, 16, and 22

Each of the independent claims includes a limitation that none of the processors of the computer system are dedicated to the handling of the system management interrupts. This limitation was not addressed by the examiner in the most recent office action. Because all words of the claim must be considered by the examiner in evaluating the patentability of the claim, these words must likewise be considered by the examiner in evaluating the patentability of the claims of the present application.

Each of the independent claims has been rejected as being obvious. Applicants submit that a prima facie case of obviousness has not been established and that a rejection of the pending claims on obviousness grounds is improper. A prima facie case of obviousness requires a showing that all of the claim limitations of the rejected claims are taught or suggested by the prior art. Manual of Patent Examining Procedure 2143 and 2143.03. The establishment of a prima facie case of obviousness requires that *all* the claim limitations be taught or suggested by the prior art. MPEP 2143.01 (emphasis added). “All words of a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970).

Each of the independent claims of this application specifies that each processor of the computer system is both operable to process a system management and is **not dedicated** to

processing the system management interrupts of the computer system. The fact that each processor of the computer system is **not dedicated** to the processing of the system management interrupt is in contrast to the disclosure of the asserted prior art, including Goodman. The examiner has recognized in a previous office action that the processor of Goodman includes one processor that is **dedicated** to handling the interrupts of the computer system of Goodman:

Goodman discloses dedicating the boot processor to handle the interrupt management; the practice of Goodman's dedicating one processor to handle the interrupt management is the claimed selecting means.

(Office Action mailed 10/06/2005, page 8, paragraph 4). Thus, it is plain from the examiner's understanding of Goodman that Goodman involves dedicating one processor to the task of processing interrupts. In the present invention, however, it is specified that **none** of the processors are dedicated to the handling of the system management interrupt. This disclosure is not present in Goodman.

This deficiency is not cured by either the allegedly admitted prior art or Smith. The allegedly admitted prior art does not explicitly or inherently teach or suggest that **none** of the processors is dedicated to processing the system management interrupts of the computer system. Additionally, Smith does not teach or suggest system interrupts, processing system interrupts, or that **none** of the processors are dedicated to processing system interrupts.

Because each of the elements of the claims is not present in the prior art of record, the rejection of the independent claims should be withdrawn, and these claims should be passed to issuance.

B. Goodman Teaches Away from the Claimed Invention

Goodman does not disclose the claimed invention. Goodman instead actually teaches away from the claimed invention through its teaching that **only** the "boot processor" of

Goodman is able to handle the interrupts of the computer system, i.e., the “boot processor” is **dedicated** to handling system interrupts.

1. Goodman

Goodman assumes that all system management interrupts will be handled by a **single, dedicated** processor. Goodman carefully and clearly explains that only the “boot processor” (processor 12a of Figure 1 of Goodman) is able to serve as the system management interrupt handler:

Although each of the processors 12 accepts the SMI, only the boot processor (e.g., system processor 12a) executes an SMI handler to service the SMI

(Goodman, column 4, lines 56-58). Goodman does not disclose or even suggest a method for handling system management interrupts in which a selection is made among the multiple processors that are operable to handle the system management interrupt. In Goodman, “only the boot processor” can handle the system management interrupt.

2. Goodman Teaches Away From the Claimed Invention

Goodman does in fact teach away from the claimed invention, as Applicants claim exactly what Goodman discourages. A reference teaches away from the invention when a person of ordinary skill in the art, upon reading the reference, would be led down a path that is divergent from the path of the patent applicant. *See Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353 (Fed. Cir. 1999); *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (explaining that a reference teaches away if it suggests a line of development that is unlikely to produce the result sought by the applicant). It is improper to combine references that teach away from their combination. *In re Grasselli*, 713 F.2d 731 (Fed. Cir. 1983); MPEP 2145.

Here, Goodman is an improper candidate for combination because Goodman

teaches away from the claimed invention. Goodman teaches away by expressly providing that all system management interrupts are to be handled by a *single, dedicated* processor. Goodman plainly discloses that “only the boot processor” is to be involved in handling the system management interrupt (column 4, line 57). The Examiner states that

Applicant have overlooked that the MPEP 2141.02 also states that the prior art’s mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does criticize, discredit, or otherwise discourage the solution claimed (In re Fulton 391 F. 3d. 1195, 1201). Both the invention as a whole and Goodman are directed to a method of handling interrupts. Whether the interrupt is handled by one dedicated processor or a selected processor based on a predetermined arbitrating scheme, it presents no new or unexpected result for the interrupt.

(Office Action mailed 5/19/2006, page 8, lines 5-13). Applicants note that handling an interrupt with one dedicated processor will have different results and effects for a computer system than handling an interrupt with a selected processor based on a predetermined arbitrating scheme. The Examiner’s assertion that no new or unexpected results are presented for the interrupt when *either* a dedicated processor or a selected processor based on a predetermined arbitrating scheme are used is not supported. A system with a single dedicated processor will have different requirements and behaviors than a system with a selected processor based on a predetermined arbitrating scheme. Goodman does not simply discourage applicants’ claimed invention, but teaches a fundamentally different method from applicants, with fundamentally different results. Thus, Goodman teaches away from the claimed invention.

There is no teaching from Goodman to suggest that any processor *other than* the boot processor is operable to handle a system management interrupt. A plain reading of Goodman would lead a person of ordinary skill to conclude that only a single, designated processor may be designated as the processor responsible for handling a system management

interrupt. Nowhere does Goodman suggest that multiple processors could be used to handle system management interrupts. To the contrary, Goodman states that “only the boot processor” is to be used for that task. Goodman cannot teach or suggest that a processor for handling an issued system management interrupt can be selected from each of the processors of the computer system.

Goodman thus necessarily includes a well-developed teaching (“only the boot processor”) that is directly contrary to the claimed invention, which involves a selection among multiple processors operable to handle a system management interrupt. Goodman itself teaches away from the combination suggested by the examiner. Therefore, applicants respectfully submit that Goodman is an improper candidate for combination.

It is well established that each prior art reference must be considered in its **entirety**, including those portions that point to the nonobviousness of the invention at issue. The relevant section of the MPEP, 2141.02, states that “[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” (emphasis in original). This section of the MPEP includes a detailed discussion of the *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550-51 (Fed. Cir. 1983) case, and the fact that the reference discussed in that case, when read as a whole, would not suggest the claimed invention. In *In re Hedges*, 783 F.2d 1038 (Fed. Cir. 1986), the Federal Circuit plainly stated that “the prior art as a whole must be considered.” *Id.* at 1041. “[I]t is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” *In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965).

Here, when considering the teachings of Goodman as a whole, a person of ordinary skill would be encouraged to use *only* a single, designated processor as the processor responsible for handling a system management interrupt. When considered as a whole, the prior art counsels directly against applicants' invention. This is "strong evidence" of the nonobviousness of the invention because Goodman teaches a solution that is the opposite of the invention of the present application. "[M]atter in the prior art which counsels against doing what the inventor did is strong evidence that the inventor's solution is not obvious." *Johnson & Son, Inc. v. Gillette Co.*, 1989 WL 87374, *42, Civ. A. Nos. 83-2657-N, 83-3201-N, (D. Mass. 1989). Therefore, applicants respectfully submit that Goodman must be considered in its entirety, and, when Goodman is considered in its entirety, Goodman teaches away from the claimed invention. As a result, a rejection of the pending claims on the basis of Goodman is improper and should be withdrawn.

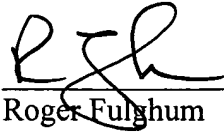
C. Dependent Claims 4-8, 19-21, and 23

Dependent claims 4-8, 19-21, and 23 will not be discussed individually herein, as each of these claims depends, either directly or indirectly, from an otherwise allowable base claim.

Conclusion

Applicants respectfully submit that the pending claims 1, 4-8, 16, and 19-23 of the present invention, as previously amended, are allowable. Applicants respectfully request that the rejection of the pending claims be withdrawn and that these claims be passed to issuance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. Fulghum', is written over a horizontal line.

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